

Vivek Kashayp
Serial no. 09/752,841
Filed 12/29/2000
Attorney docket no. BEA920000011US1

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REMARKS

Change of correspondence address

Applicant has submitted herewith a change of correspondence address form. Therefore, Applicant requests that the correspondence address for the present patent application be changed in accordance with this form.

Claim rejections under 35 USC 103

Claims 1-19 have been rejected under 35 USC 103(a) as being unpatentable over Lee (6,601,101) in view of Espy (5,922,077). Claims 1, 11, and 15 are independent claims, from which the remaining claims depend. Applicant has amended independent claims 1, 11, and 15, and asserts that as amended, these claims are patentable over Lee in view of Espy, such that all the pending claims 1-19 are patentable over Lee in view of Espy. Applicant specifically discusses in detail claim 1 as representative of claims 1, 11, and 15, and notes that claims 11 and 15 have substantially the same limitations as claim 1, for purposes of patentability over Lee in view of Espy.

Claim 1 has been amended as follows. First, the second system assumes the connection for the first system "in a peer-to-peer manner" in response to determining that the first system is in a failed state. Second, prior to the first system having entered the failed state, the second system "snoop[s] the connection from a client to the first system to use the application thereof, in order to maintain information regarding the connection as known by the first system." That is, the connection is from a client to the first system, so that the client can use the application of the first system. The second system snoops this connection to maintain information regarding the connection, as is already known by the first system, by virtue of it being a part of the connection. Third, "the snooping of the connection from the client to the first system enables the second system to assume the connection without losing the information regarding the connection as

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known by the first system, such that the client is unaware that the second system has assumed the connection for the first system.” Applicant asserts that Lee in view of Espy does not teach any of these three limitations.

Lee in view of Espy does not teach a “peer-to-peer manner” for connection assumption

First, with respect to the second system assuming the connection for the first system “in a peer-to-peer manner,” Applicant submits that Lee in view of Espy does not teach, disclose, or suggest this limitation of the claimed invention. The Examiner relies upon Lee to teach all aspects of the claimed invention except for the specific ownership information received by the second system from the first system, which the Examiner says is taught by Espy. Therefore, Applicant focuses attention on Lee not teaching the second system assuming the connection for the first system “in a peer-to-peer manner,” such that Lee in view of Espy does not teach the second system assuming the connection for the first system “in a peer-to-peer manner.”

Lee teaches a “Master/Slave or Aggregator/Controller” strategy for system failover, not a “peer-to-peer” strategy as to which the claimed invention is limited. (Col. 23, ll. 37-38) This is best depicted in FIGs. 1A and 1B of Lee. In FIG. 1A, the client 110 communicates with the switch 120. The switch 120 directs traffic from the client 110 to the device 135, such that there is a connection between the device 135 and the client 110. If the device 135 fails, then the switch 120 instead directs traffic from the client 110 to the device 130, so that the connection between the device 135 and the client 110 is instead assumed by the device 130. The switch 120 “updates its forwarding table so that additional messages from the client to cluster device will be routed to the second device [130] instead of the first device [135].” (Col. 6, ll. 21-23)

The manner by which the second system assumes the connection for the first system in Lee is thus for the switch, which acts as a master, to allow the second system to assume the connection for the first system. It is the switch in Lee that directs traffic to the first system prior to the first system failing, and which subsequently directs traffic to the second system after the

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first system fails. The approach by which the second system assumes the connection for the first system in Lee is therefore a classic master/slave strategy. By comparison, in a peer-to-peer approach, as to which the claimed invention is limited, there is no master that directs traffic from the failed first system to the second system so that the second system can assume the connection for the first system. Rather, the peer-to-peer manner for the second system assuming the connection for the first system, as inherent in and by definition of a peer-to-peer approach, has the second system taking over the connection for the first system without a switch or other master directing traffic to the second system in lieu of directing traffic to the first system.

Applicant invites the Examiner to look at FIG. 4 of the patent application as originally filed and compare it to FIGs. 1A and 1B of Lee in this regard. For instance, looking first at the patent application as originally filed, the first server 43 on the network 46 of FIG. 4 may fail. Connection traffic intended for the first server 43 is still sent by the router 41 and/or the router 42 onto the network 46. However, the second server 44 assumes the connection for the first server 43 upon failure of the first server 43, so that it handles the connection traffic for the first server 43 on the network 46. This is what is inherently meant by a peer-to-peer manner of a second system assuming a connection for a first system.

By comparison, in FIGs. 1A and 1B of Lee, the switch 120 only directs traffic from the client 110 to the first device 135 before the first device 135 fails. After the first device 135 fails, the switch 120 then only directs traffic from the client 110 to the second device 130, so that the second device 130 can assume the connection for the first device 135. This is inherently a classic master-slave manner of a second system assuming a connection for a first system, since the master – the switch 120 – does all the work, instead of the systems themselves, in having one system assume a connection for another system. For this reason, Lee does not disclose a “peer-to-peer manner” for a second system to assume a connection for a first system, such that Lee in view of Espy does not disclose such a “peer-to-peer manner.” Therefore, for this reason alone, Lee in view of Espy does not render the claimed invention obvious.

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Lee in view of Espy does not teach second system snooping of connection of first system

Second, with respect to the second system, prior to failure of the first system, snooping the connection from a client to the first system, in order to maintain information regarding the connection as known by the first system, Applicant submits that Lee in view of Espy does not teach, disclose or suggest this limitation of the claimed invention. As before, the Examiner relies upon Lee to teach all aspects of the claimed invention except for the specific ownership information received by the second system from the first system, which the Examiner says is taught by Espy. Therefore, Applicant focuses attention on Lee in particular as not teaching the second system snooping the connection of the first system prior to failure of the first system, in order for the second system to maintain information regarding the connection as known by the first system, such that Lee in view of Espy does not teach, disclose, or suggest this limitation of the claimed invention.

As has been described in relation to FIGs. 1A and 1B of Lee, the client 110 of Lee communicates with the first device 135 through the switch 120 prior to failure of the first device 135. The switch 120 directs all traffic from the client 110 to the first device 135 before the first device 135 fails, as specifically depicted in FIG. 1A. Therefore, the second device 130 does not – and cannot – monitor, or snoop, the connection between the client 110 and the first device 135 at all before the first device 135 fails.

By comparison, the claimed invention is limited to the second system snooping the connection between the client and the first system prior to the first system fails. The second system accomplishes this snooping so that it maintains information regarding the connection. Such information is inherently known by the first system, since the connection is the first system's. In order for the second system to maintain this information, too, it thus snoops, or monitors, the connection between the first system and the client.

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Therefore, Lee does not disclose a second system snooping the connection between a client and a first system prior to the first system failing for the second system to maintain information regarding this connection as known by the first system. Lee discloses the second system as not even being able to snoop the connection, since the switch directs all traffic thereof only to the first system prior to the first system failing. Lee in view of Espy thus also does not disclose this limitation of the claimed invention, such that Lee in view of Espy does not render the claimed invention obvious for this reason alone as well.

Lee in view of Espy does not teach the snooping enabling assumption by the second system

Third, with respect to "the snooping of the connection from the client to the first system enabl[ing] the second connection to assume the connection without losing the information regarding the connection as known by the first system, such that the client is unaware that the second system has assumed the connection for the first system," Applicant submits that Lee in view of Espy does not teach, disclose or suggest this limitation of the claimed invention. As before, the Examiner relies upon Lee to teach all aspects of the claimed invention except for the specific ownership information received by the second system from the first system, which the Examiner says is taught by Espy. Therefore, Applicant focuses attention on Lee in particular as not teaching that the snooping of the first system's connection enables the second system to assume the connection, such that the client is unaware that the second system has assumed the connection. As such, Lee in view of Espy does not teach, disclose, or suggest this limitation of the claimed invention.

As has been described above, Lee does not disclose any type of snooping by the second system of the connection from the client to the first system prior to failure of the first system. As such, this snooping cannot be the thing that enables the second system to assume the connection for the first system, upon failure of the first system, such that the client is unaware that the second system has assumed the connection for the first system. Instead, as is apparent from FIGs. 1A

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and 1B of Lee, what enables the second device 130 to assume the connection from the client 110 for the first device 135, such that the client 110 is unaware that the second device 130 has assumed the connection, are actions performed by the switch 120. That is, the switch 120 intelligently transfers the connection from the first device 135 to the second device 130, as depicted in FIG. 1B, upon failure of the first device 135. The client 110 is unaware that the second device 130 has assumed the connection, because the switch 120 intelligently allows this assumption to occur. Snooping of the second device 130 of the connection between the client 110 and the first device 135 does not enable this assumption, since, indeed, such snooping prior to failure of the first device 135 does not – and cannot – even occur, as depicted in FIG. 1A.

By comparison, the claimed invention is limited to such snooping as that which enables the second system to assume the connection for the first system without losing the information regarding the connection as known by the first system. As such, it is this snooping in the claimed invention that allows the client to be unaware that the second system has assumed the connection for the first system, not actions performed by an intelligent switch, as in Lee and thus as in Lee in view of Espy. Therefore, Lee in view of Espy does not teach this limitation of the claimed invention, and Lee in view of Espy does not render the claimed invention obvious for this reason alone as well.

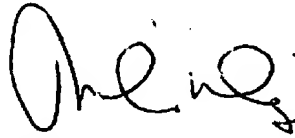
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Conclusion

Applicants have made a diligent effort to place the pending claims in condition for allowance, and request that they so be allowed. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Applicants' Attorney so that such issues may be resolved as expeditiously as possible. For these reasons, this application is now considered to be in condition for allowance and such action is earnestly solicited.

Respectfully Submitted,



June 28, 2004
Date

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